

Ethnic Socialization in Neighborhood Contexts: Implications of Ethnic Attitude and Identity Development among Mexican-Origin Adolescents

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Abstract:

Neighborhood Latino ethnic concentration, above and beyond or in combination with mothers' and fathers' ethnic socialization, may have beneficial implications for minority adolescents' ethnic attitude and identity development. These hypotheses, along with two competing hypotheses, were tested prospectively (from ~~Age~~ = 12.79–15.83 years) in a sample of 733 Mexican-origin adolescents. Neighborhood ethnic concentration had beneficial implications for ethnic identity processes (i.e., ethnic exploration and perceived peer discrimination) but not for ethnic attitudes. For Mexico-born adolescents, high maternal ethnic socialization compensated for living in neighborhoods low on ethnic concentration. Findings are discussed vis-à-vis the ways in which they address major gaps in the neighborhood effects literature and the ethnic and racial identity development literature.

Keywords: ethnic socialization | child development | Latinx adolescents | ethnic identity development | neighborhood ethnic concentration | ethnic attitudes | Mexican-American youth

Article:

Patterns of ethnic and racial concentration and dispersion across the U.S. neighborhoods are likely to have important implications for child development (Bronfenbrenner & Morris, 2006). Culturally informed developmental theory (García Coll & Marks, 2009; García Coll et al., 1996) suggests that neighborhood coethnic or coracial concentrations may have particular salience for the development of ethnic and racial attitudes and identities among U.S. minority youth. Developmental models germane to the study of ethnic and racial attitudes and identities suggest that, especially during adolescence, both familial and extrafamilial socialization forces shape the processes of (a) exploring what one's ethnicity or race means to oneself, (b) developing positive or negative attitudes toward one's group, and (c) perceiving discrimination based on racial or

ethnic group membership (García Coll & Marks, 2009; Umaña-Taylor et al., 2014). Yet, the implications of adolescents' neighborhood environments for their ethnic or racial attitude and identity development are not well understood (see Murry, Berkel, Gaylord-Harden, Copeland-Linder, & Nation, 2011 for a review).

From childhood to early adulthood, ethnic and racial minority individuals develop increasingly sophisticated sets of self-ideas about their group membership via a process known as ethnic identity development (when talking about an ethnic group; Knight, Bernal, Garza, Cota, & Ocampo, 1993) or racial identity development (when talking about a racial group; Umaña-Taylor et al., 2014). Sociocognitive advances taking place during adolescence, however, mean that youth are negotiating increasingly complex social identities (Erikson, 1968) and feelings of belonging (Faircloth, 2009) related to their ethnic and racial selves (Umaña-Taylor et al., 2014). Autonomous social exposures are increasing dramatically and vying for influence with family-based socialization efforts. Consequently, early adolescents are able to more independently access their neighborhoods (Leventhal, Dupéré, & Brooks-Gunn, 2009) and explore what their ethnic and racial groups mean to them (Umaña-Taylor et al., 2014). Similarly, early adolescents have perspective-taking and other sociocognitive skills that shape their attitudes toward their ethnic and racial groups (Quintana, 1994) and their ability to understand that members of these groups may be the targets of discrimination (Spears Brown & Bigler, 2005), particularly in situations involving peers (Bellmore, Nishina, You, & Ma, 2012). Yet, the degree to which early adolescents' ethnically or racially structured neighborhoods influence their ethnic and racial attitude and identity development, above and beyond or in combination with parents' socialization efforts, has not been examined longitudinally.

We explored associations between neighborhood ethnic concentration and ethnic attitude and identity development prospectively, from 7th grade (approximately 12.8 years) to 10th grade (approximately 15.8 years), among a sample of Mexican-origin adolescents living in U.S. neighborhoods. Ethnic exploration (the process of seeking or being exposed to information about the coethnic group), ethnic pride (positive attitudes and affirmative feelings about the coethnic group), and perceived peer discrimination (the process of perceiving oneself, or one's group, as the target of discrimination during peer interactions) are three psychological constructs central to ethnic identity development during adolescence (García Coll & Marks, 2009; Spears Brown & Bigler, 2005; Umaña-Taylor, Wong, Gonzales, & Dumka, 2012; Umaña-Taylor et al., 2014). Mexican-origin Latinos reside across the full range of neighborhoods, from concentrated Latino neighborhoods (where they are a numerical majority) to dispersed, coethnically isolated neighborhoods (where they are a numerical minority; Roosa et al., 2009). This range is critical for testing theoretically driven hypotheses.

Theoretical Approaches and Empirical Findings

With the focus on neighborhoods, it is important to recognize neighborhood theories, which explain how neighborhood environments work to influence development, even though such perspectives are not specific to identity development. Social disorganization theory (Sampson, Raudenbush, & Earls, 1997) asserts that neighborhood structural characteristics influence development via mediating mechanisms, including neighborhood-level social processes (e.g., collective efficacy, intergenerational closure; Leventhal et al., 2009). Regarding ethnic

concentration specifically, the theory suggests that ethnic homogeneity in neighborhoods is beneficial because cultural similarity facilitates the capacity of residents to organize and coalesce around shared prosocial norms. Consequently, high ethnic concentration (a structural characteristic) should promote positive social processes in neighborhoods and, in turn, positive development among resident youth (Sampson et al., 1997). In the most recent review of empirical research, however, neighborhood ethnic (e.g., % Latino) and racial (e.g., % Black) concentration effects on adolescent development were described as “few and somewhat inconsistent” (Leventhal et al., 2009, p. 416).

Inconsistencies may be due to the existence of historic, geographic, and demographic contexts in which the range of ethnic concentration was empirically restricted such that the high end of observed values was somewhere in the middle of the range of possible values (e.g., 50% Latino). Such restrictions curtail an ability to observe effects consistent with social disorganization theory because the “higher” empirical levels of ethnic concentration in these samples would not be high enough to be consistent with the homogeneity and cultural similarity explanations advanced (instead, a 50% Latino neighborhood is a heterogeneous or diverse neighborhood; Jackson, Browning, Krivo, Kwan, & Washington, 2016). Inconsistencies may also reflect support for the structural hypothesis (i.e., high ethnic concentration promotes positive development) without support for the mediating social processes hypothesis (e.g., that the benefits are explained by collective efficacy). Indeed, among several studies documenting benefits of high ethnic concentration, the effects remained when social processes were included in the models (Browning, Burrington, Leventhal, & Brooks-Gunn, 2008; Jackson et al., 2016; Sampson, Morenoff, & Raudenbush, 2005), suggesting the need to examine alternative hypotheses and pathways.

Cultural-developmental and sociological theories on immigrant adaptation can inform alternative hypotheses. First, neighborhoods are a theoretically salient context affecting the development of adolescents' self-concept and ethnic identity (Oyserman, Brickman, & Rhodes, 2007), outcomes that tend to be overlooked in scholarship on neighborhood effects (Murry et al., 2011). Neighborhood ethnic and racial concentrations, however, are experienced differently by in- and out-group members (Portes, Fernández-Kelly, & Haller, 2009). As such, *coethnic* or *coracial* concentrations (e.g., Mexican-origin Latinos living in Latino concentrated neighborhoods) are a developmentally salient feature of minority youths' neighborhoods (García Coll et al., 1996). Some prior inconsistencies (Leventhal et al., 2009), therefore, may reflect ethnic and racial heterogeneity among samples (e.g., studying neighborhood Latino ethnic concentration effects on adolescent development without recognizing that Latino concentration may be experienced differently by Latinos and non-Latinos). Coethnic or coracial concentrations can be a valuable resource for minority and immigrant families and youth, with the potential to shelter adolescents from exposure to discrimination, promote positive immigrant adaptation, and promote ethnic identity development (García Coll & Marks, 2009; Portes et al., 2009).

Together, these neighborhood, cultural-developmental, and immigrant adaptation perspectives converge on an *ethnic concentration* hypothesis. Accordingly, *high* neighborhood Latino concentration (Sampson et al., 1997) should shelter *coethnic* adolescents from exposure to ethnic discrimination, help adolescents to retain key aspects of their heritage culture (Portes &

Rivas, 2011), and promote ethnic attitude and identity development (García Coll et al., 1996; Portes et al., 2009). These perspectives, however, also emphasize parents' roles in neighborhoods (Leventhal et al., 2009) and in adolescents' ethnic attitude and identity development (García Coll et al., 1996; Portes et al., 2009), in particular, the role of parents' ethnic socialization (Hughes et al., 2006). In light of these theoretical considerations, the current study had two aims: (a) to examine if neighborhood Latino ethnic concentration predicted Mexican-origin adolescents' ethnic attitudes and identities over and above parents' ethnic socialization (main effects) and (b) to examine whether neighborhood ethnic concentration interacted with parents' ethnic socialization to predict ethnic attitudes and identities (Parenting \times Neighborhood interaction effects).

Main Neighborhood Ethnic Concentration Effects

It is critical to examine the implications of maternal and paternal ethnic socialization, in tandem with neighborhood coethnic or coracial concentrations, on unique components of ethnic and racial identity development. Ethnic and racial socialization, in which parents transmit information to their children regarding race and ethnicity, promotes ethnic and racial identity development (Hughes et al., 2006), including exploration (Umaña-Taylor et al., 2014) and positive in-group attitudes (Umaña-Taylor & Guimond, 2012). It is also associated with higher levels of perceived discrimination (Stevenson & Arrington, 2009), perhaps because one of its main goals is to help minority youth to recognize and cope with discrimination in the U.S. society (Hughes et al., 2006). Although not always replicated (Knight et al., 2011), several studies have noted the importance of fathers' (in addition to mothers') ethnic and racial socialization for minority adolescent development (Benner & Kim, 2009; Caldwell, Rafferty, Reischl, De Loney, & Brooks, 2010) and ethnic and racial identity development (Hernández, Conger, Robins, Bacher, & Widaman, 2014). Still, during middle adolescence some components of identity development may be more developed than others (Umaña-Taylor, Gonzales-Backen, & Guimond, 2009), fathers may exert stronger influences than mothers (Hernández et al., 2014; Zeiders, Updegraff, Umaña-Taylor, McHale, & Padilla, 2016), and neighborhoods may become more salient (Leventhal et al., 2009).

Scholars have called for work examining links between neighborhoods and identity development during adolescence (Murry et al., 2011). Although an empirical literature is emerging, evidence supporting the theoretical salience of neighborhoods for ethnic and racial attitude and identity development is mixed. Several studies fail to document any significant findings (Hurd, Sellers, Cogburn, Butler-Barnes, & Zimmerman, 2013; Rivas-Drake & Witherspoon, 2013; Supple, Ghazarian, Frabutt, Plunkett, & Sands, 2006). Some prior findings, however, have been consistent with the *ethnic concentration* hypothesis. Stevenson and Arrington (2009) found limited, cross-sectional, positive associations between Black concentration and racial attitudes, concluding that predominantly Black neighborhoods were safe and supportive places for Black youth to develop racial attitudes. White, Zeiders, Knight, Roosa, and Tein (2014) found that Mexican-origin Latinos who lived in coethnically concentrated neighborhoods (vs. those that did not) had decreasing (vs. increasing) trajectories of perceived peer discrimination. Feinauer and Whiting's (2012, p. 69) mixed methods findings suggested that ethnically homogenous neighborhoods provided “milieus of cultural compatibility” that nurture the development of healthy and connected ethnic identities among Latino youth. These findings speak to the

organizing capacity of high neighborhood ethnic concentration (Sampson et al., 1997) and the capacity of the coethnic community to shelter minority and immigrant youth from discrimination and promote positive adaptation (Portes et al., 2009). The generalizability of findings on African Americans' racial *attitudes* (Hurd et al., 2013; Rivas-Drake & Witherspoon, 2013; Stevenson & Arrington, 2009) to Mexican-origin Latinos' ethnic *attitudes* (i.e., ethnic pride) and identity-related *processes* (i.e., ethnic exploration and perceived peer discrimination) is, however, unknown.

It is important to note that some empirical findings suggest competing hypotheses. These findings and perspectives suggest that either being in a numerical minority context (e.g., a neighborhood low on coethnic concentration) or being in a diverse context (e.g., a racially or ethnically mixed neighborhood) increases ethnic and racial salience and discrimination, thereby promoting ethnic and racial identity development (French, Seidman, Allen, & Aber, 2006; Portes & Rumbaut, 2001; Rumbaut, 2008). Consistent with these perspectives, one study found that increases in numerical minority status were associated with higher perceived discrimination (Bellmore et al., 2012), and another found that higher diversity was associated with higher perceived discrimination (Benner & Graham, 2011). Umaña-Taylor (2004) found that Latino adolescents in a non-Latino high school (a numerical minority context) had the highest ethnic identity scores, and those in a Latino high school had the lowest ethnic identity scores. A cross-sectional study found that lower scores on a neighborhood ethnic and racial diversity index were associated with lower ethnic and racial identity scores among Latino and African American youth (Oyserman & Yoon, 2009). A mixed methods study found that diverse neighborhoods may remind students that they are different and increase ethnic salience (Feinauer & Whiting, 2012). These perspectives, though not always supported (Stevenson & Arrington, 2009; White et al., 2014), especially for Latinos (French, Seidman, Allen, & Aber, 2000), highlight ethnic and racial structuring as an important aspect of the social context of ethnic and racial identity development (Oyserman et al., 2007). They are consistent with either a *numerical minority* (Umaña-Taylor, 2004) or *diversity* hypothesis (Oyserman & Yoon, 2009), suggesting that contexts that accentuate racial and ethnic differences promote discrimination and ethnic and racial identity development (Portes & Rumbaut, 2001; Rumbaut, 2008).

Interactive Neighborhood Ethnic Concentration and Parenting Effects

Especially in light of limited evidence supporting collective efficacy and intergenerational closure as mediators of neighborhood ethnic concentration effects on adolescent development (e.g., Jackson et al., 2016), it is critical to study alternative pathways, including Parenting \times Neighborhood interactions (Leventhal et al., 2009). Because prior work has called for further theory development in this area (Caughy, Nettles, O'Campo, & Lohrlink, 2006), we reinterpreted mainstream neighborhood theory and empiricism (Roche & Leventhal, 2009) to elucidate two kinds of positive Parenting \times Neighborhood interactions. We focused on reinterpreting positive parenting interactions because ethnic and racial socialization are positive aspects of minority parents' parenting (Hughes et al., 2006). First, well-resourced neighborhood environments may amplify the benefits of positive parenting on adolescent development (Roche & Leventhal, 2009). Reinterpreted, living in an ethnically or racially concentrated neighborhood, where culturally salient resources are more prevalent (García Coll & Marks, 2009; Yoshikawa, 2011), may amplify the benefits of ethnic and racial socialization for adolescents.

Second, positive parenting may compensate for living in under resourced neighborhood environments (Roche & Leventhal, 2009). Reinterpreted, high parental ethnic or racial socialization may be able to compensate for a dearth of culturally salient resources in neighborhoods low on coethnic or coracial concentrations.

Although the potential for such interactions is a recurring theme in our guiding theoretical frameworks (García Coll et al., 1996; Leventhal et al., 2009; Portes et al., 2009), none provides guidance about the probable direction of these interactions. Two studies assessed parent ethnic or racial socialization *and* neighborhood ethnic or racial structuring, but one did not test their interactive effects (Stevenson & Arrington, 2009) and the other had a restricted range of ethnic concentration (Supple et al., 2006). Drawing from a broader set of literature, support was found across diverse samples for both the amplification and compensatory hypotheses (Leventhal et al., 2009; Noah, 2015). Caughy et al.'s (2006) findings highlighted both amplification and compensatory effects regarding the association between racial socialization and cognitive, language, and behavioral outcomes across neighborhoods diverse on risk. In their qualitative study, Portes et al. (2009) found that immigrant parents' ability to ethnically socialize their children compensated for restricted access to the coethnic community and helped adolescents to retain healthy ties to their Mexican identity.

The Current Study

We examined the prospective implications of both neighborhood ethnic concentration *and* parents' ethnic socialization for the development of ethnic attitudes and identities during a development period where these two forces of socialization are converging. We focused on within-group or coethnic concentration as the theoretically salient feature of the neighborhood ecology and extended beyond prior investigations by including three important and distinct aspects of ethnic and racial identity development: ethnic exploration, ethnic pride, and perceived peer discrimination (García Coll & Marks, 2009). First, we expected that, on average, neighborhood coethnic concentration would predict increases in ethnic exploration and ethnic pride, and decreases in perceived peer discrimination above and beyond parents' ethnic socialization and prior levels of the dependent variables (*ethnic concentration* hypothesis). We, however, examined alternative patterns, including those consistent with the *numerical minority* hypothesis (Umaña-Taylor, 2004) and the *diversity* hypothesis (Oyserman & Yoon, 2009). Second, we estimated Parenting \times Neighborhood interactions, exploring the potential for either amplification or compensatory effects. We studied these associations longitudinally in a representative sample of Mexican-origin adolescents from a wide range of neighborhood contexts (Roosa et al., 2008). We controlled for variability in adolescents' family socioeconomic status (SES), gender, and nativity (well-known individual factors affecting the outcomes and influencing neighborhood selection), and prior levels of the three dependent variables.

Method

Data are from a longitudinal study of 749 Mexican-origin families that were originally recruited from children's fifth-grade classroom rosters (Fall 2004–Spring 2006) and interviewed three times over 5 years (5th grade, 7th grade, and 10th grade). Families (579 were two parent and 170

were single parent, female headed) were screened according to these criteria: They had a target fifth grader attending a sampled school; the participating mother was the biological mother, lived with the child, and was Mexican origin; the child's biological father was Mexican origin; the child was not learning disabled; and no stepfather figure was living with the child. Father participation in the subset of two-parent households was not required, but 82% of these fathers participated. Linguistically, 30.2% of mothers, 23.2% of fathers, and 82.5% of children chose to be interviewed in English and the remainder in Spanish. Annual family income ranged from less than \$5,000 to more than \$95,000 ($M = \$30,000$ – $\$35,000$). Mothers' mean age was 35.9 years ($SD = 5.81$), fathers' was 38.1 years ($SD = 6.26$), and children's was 10.4 years ($SD = 0.55$); both parents reported about 10 years of education ($SD_M = 3.67$, $SD_F = 3.94$). The majority of the children (48.7% female) were born in the United States (70.3%), and the majority of parents were born in Mexico (74.3% of mothers, 79.9% of fathers). The full sample of mother–adolescent dyads represents one of the largest and most representative samples of Mexican-origin families (Roosa et al., 2008); the father–adolescent subsample represents an important population of fathers, one that resides in a particularly wide range of economic and neighborhood circumstances (White & Roosa, 2012). In the southwestern state in which this study was conducted the population comprised primarily non-Latino Whites (59%) and Latinos (30%; with the remaining 11% split almost evenly across non-Latino Blacks, non-Latino Native Americans and Alaska Natives, and other races): 89% of Latinos were of Mexican origin (Diaz McConnell & Skeen, 2009).

Because adolescence is a critical period for ethnic and racial identity development (Umaña-Taylor et al., 2014), and for autonomous exposures to neighborhood environments (Leventhal et al., 2009), data for the current study were collected during 7th ($M_{age} = 12.79$ years) and 10th ($M_{age} = 15.83$ years) grades (the second and third waves of the larger study). Of the original fifth-grade sample, 16 families had moved to Mexico by seventh grade. These families were excluded from the present study because they were not living in U.S. neighborhood contexts (that varied on Latino ethnic concentration) during early adolescence. This yielded an analytic sample of 733 families in the mother models and 460 families in the father models. Compared to families who remained in the United States, families that moved to Mexico by seventh grade were more likely to have mothers, $\chi^2(1) = 5.636$, $p = .017$, and children, $\chi^2(1) = 15.994$, $p < .001$, born in Mexico; have mothers, $\chi^2(1) = 3.990$, $p = .048$, and children, $\chi^2(1) = 37.704$; $p < .001$, who completed their fifth-grade interviews in Spanish; have children that were older in fifth grade, $t(747) = 2.185$, $p = .029$; and to have lower income, $t(16.76) = -6.421$, $p < .001$.

Of the 733 Mexican-origin families residing in the United States during their children's early adolescence, 94.7% participated in 7th grade, 85.5% participated in the 10th grade, and 84.9% participated in both 7th and 10th grades. Preliminary attrition analyses examined whether families who participated in interviews in 7th and 10th grades differed on 5th-grade child demographic (i.e., gender, age, nativity, language of interview, family annual income), mother demographic (i.e., marital status, age, nativity), and father demographic (i.e., age, nativity) variables from those that did not. Most demographic comparisons were nonsignificant, though families who participated in 10th grade had higher family annual income, $t(715) = -2.913$, $p = .004$, and children were less likely to be Mexico born, $\chi^2(1) = 4.842$, $p = .036$. Regarding current study variables: Those families that participated in seventh grade came from fifth-grade neighborhoods with lower concentrations of Latino

residents, $t(728) = 2.243, p = .025$; no differences were observed in all other study variables, including the 10th-grade-dependent variables. Therefore, to address missingness, we used fifth-grade auxiliary variables and full information maximum likelihood (FIML) estimation (Collins, Schafer, & Kam, 2001) to estimate hypothesized models in the full sample of U.S.-residing mother–adolescent dyads ($N = 733$) and the subsample of father–adolescent dyads ($n = 460$).

Measures

Demographic Variables

Parents reported on the adolescents' country of birth (0 = Mexico, 1 = U.S.), gender (0 = female, 1 = male), and household composition. Scholars control for SES to reduce endogeneity problems in neighborhood research (Dupéré, Leventhal, Crosnoe, & Dion, 2010). Mainstream indices of SES (e.g., income, education) are, however, less valid among immigrant samples because they can both underestimate and overestimate available resources (Fuligni & Yoshikawa, 2003). We, therefore, relied on two measures of SES, both captured at the seventh-grade interview. First, we measured annual family income (1 = *less than or equal to \$5,000* to 20 = *95,001+*), consistent with prior work (Dupéré et al., 2010). For our second measure of SES, parents reported on their psychological distress resulting from financial difficulties using a cross-cultural and cross-language (Spanish and English) equivalent measure of economic pressure (Barrera, Caples, & Tein, 2001), consistent with recommendations made elsewhere for working with immigrant samples (Roosa, Deng, Nair, & Burrell, 2005). Items (19; $\alpha_{\text{mothers}} = .80, \alpha_{\text{fathers}} = .81$) assessed the inability to make ends meet, not enough money for necessities, economic cutbacks, and financial strain (e.g., “tell us how much difficulty you had with paying your bills”). Because the economic cutbacks questions were on a count scale and the remaining questions were on a 5-point Likert-type scale, we calculated a composite of standardized scores. Higher scores reflected greater economic pressure.

Neighborhood Ethnic Concentration (Seventh Grade)

Adolescents' addresses were geocoded and matched to census tracts. Data on the percentage of Latino residents in each census tract were obtained from the U.S. Census Bureau (2011). The percentage of Latinos in the census tract ranged from 3.98% to 96.95% ($M = 57.81\%, SD = 23.49$). As has been seen with prior work (Oyserman & Yoon, 2009), our measure of minority group concentration correlated negatively and strongly with neighborhood education levels ($r = -.91, p < .001$). It was also negatively and strongly correlated with the proportion of non-Latino Whites ($r = -.95, p < .001$).

Ethnic Socialization (Seventh Grade)

Mothers' and fathers' reported on their own cultural socialization practices (Hughes et al., 2006) by responding to a 10-item Ethnic Socialization Scale (Knight et al., 1993). Evidence confirming the factor structure, reliability, and construct validity of the measure is presented elsewhere (Knight et al., 2011). Parents separately rated the frequency of their behaviors (e.g., How often do you tell your child about important and famous Mexican or Mexican-American people in

history?) using a 5-point scale, 1 (*almost never or never*) to 5 (*a lot of the time*), and each parent was assigned a mean score; Cronbach's α was .76 for mothers and .77 for fathers.

Ethnic Exploration (7th and 10th Grades)

Adolescents responded to seven items (e.g., “you have attended events that have helped you learn more about your background”) on the exploration subscale of the Ethnic Identity Scale (Umaña-Taylor, 2004) using a 4-point Likert scale, 1 (*does not describe me at all*) to 4 (*describes me very well*). Evidence confirming the factor structure, reliability, and construct validity of the subscale is presented in detail elsewhere (White, Umaña-Taylor, Knight, & Zeiders, 2011). We computed a mean score across the items; Cronbach's α was .74 in 7th grade and .81 in 10th grade.

Ethnic Pride (7th and 10th Grades)

Adolescents responded to four items (e.g., “You have a lot of pride in being Mexican”) from the Mexican American Ethnic Pride scale, which assessed their sense of affirmation and positive attitudes toward their ethnic group (Umaña-Taylor et al., 2012). This scale has been previously validated in Spanish- and English-speaking samples (Umaña-Taylor et al., 2012) and in the current sample (Knight et al., 2011). Internal consistency for the four items was good (7th grade $\alpha = .70$, 10th grade $\alpha = .78$). The response scale ranged from 1 (*not at all true*) to 5 (*very true*); we computed mean scores.

Perceived Peer Discrimination (7th and 10th Grades)

Adolescents responded to five items (e.g., “Kids called your names because you are Mexican American”) regarding their perceptions of ethnic-based discriminatory experiences from peers using a scale that has previously demonstrated reliability and construct validity elsewhere (Delgado, Updegraff, Roosa, & Umaña-Taylor, 2011) and in the current sample (Zeiders, Roosa, Knight, & Gonzales, 2013). Response options ranged from 1 (*almost never or never*) to 5 (*almost always or always*). We computed a mean score; higher scores reflected greater perceived peer discrimination. Cronbach's α was .78 in both grades.

Data Analysis

The 733 families resided in 222 neighborhoods at seventh grade. We, therefore, estimated intraclass correlation coefficients (ICCs) to examine the degree of within-neighborhood shared variance in all study variables (Table 1). ICCs for ethnic attitude and identity variables ranged from .022 to .081, suggesting a modest degree of within-neighborhood variance. In light of the ICCs, we ran our initial models in both hierarchical linear modeling (HLM using Self-Analysis Scale proc mixed) and structural equation modeling (SEM using a robust maximum likelihood estimator and the type = complex option) frameworks. The HLM framework modeled individual- and neighborhood-level variance components and relied upon separate models to examine hypothesized effects on multiple dependent variables (Raudenbush & Bryk, 2002). The SEM framework adjusted standard errors for clustering within neighborhoods, used FIML estimation to handle missing data, and permitted simultaneous examination of multiple

dependent variables (Muthén & Muthén, 2010). Because initial model results replicated across frameworks, we present the more parsimonious SEM models herein.

Separate SEMs for mothers and fathers estimated the effects of seventh-grade neighborhood ethnic concentration, parent ethnic socialization, and their interaction on three dependent variables assessed in the 10th grade: ethnic exploration, ethnic pride, and perceived peer discrimination. We controlled for seventh-grade levels of the dependent variables, supporting prospective tests of study hypotheses. The variables included in the interaction term were mean centered. Demographic covariates included SES, child gender, and nativity. We employed two different SES covariates: economic pressure or annual family income. The former is culturally informed (Roosa et al., 2008) because it recognizes that mainstream assessments of SES are not necessarily valid among immigrant samples (Fuligni & Yoshikawa, 2003). The latter offers important comparisons to prior work on neighborhood ethnic concentration effects. We ran our analyses on the full sample of mothers and adolescents living in U.S. neighborhoods ($N = 733$) and the subsample of fathers and adolescents living in U.S. neighborhoods ($n = 460$). This choice maximized generalizability, offered a replication of hypothesis testing, and acknowledged the important role of fathers in the lives of Latino youth (Cabrera & Bradley, 2012).

Our analyses accounted for competing hypotheses. The *coethnic concentration* hypothesis suggests a *positive linear* association between neighborhood Latino concentration and Mexican-origin adolescents' ethnic exploration and ethnic pride and a *negative linear* association with perceived peer discrimination: As neighborhoods become higher on Latino concentrations, adolescents will be sheltered from discrimination and be able to safely explore their ethnicity and develop a sense of group pride. The *numerical minority* hypothesis suggests a *negative linear association* between Latino concentration and ethnic exploration, ethnic pride, and perceived peer discrimination: As neighborhoods become lower on Latino concentration, adolescents will be exposed to higher levels of discrimination and need to develop an ethnic identity. Finally, the *diversity hypothesis* suggests a *curvilinear association* between Latino concentration and ethnic attitude and identity development, such that ethnic identity development and discrimination will be maximized in mixed neighborhoods (e.g., 50% Latino and 50% non-Latino). To address the potential for this curvilinear association, we estimated a quadratic neighborhood ethnic concentration effect.

We used multigroup models to examine the generalizability of the hypothesized effects across child gender and nativity, testing whether the effects of neighborhood ethnic concentration, parents' ethnic socialization, and their interaction on ethnic exploration, ethnic pride, and perceived peer discrimination differed across boys and girls or across U.S. versus Mexico nativity. Due to the initial sampling design, the mother sample included a reasonable proportion of mothers from both female-headed, single-parent households and two-parent households. Consequently, we also used multigroup models to confirm the generalizability of the hypothesized neighborhood effects across household structure in the mother-adolescent models only. When testing stability of findings across child gender, nativity, and household structure, a scaling-corrected likelihood ratio test was utilized, and the gender or nativity variable was dropped as an SEM covariate and used as a grouping variable instead.

Table 1. Descriptive Statistics and Correlations of All Study Variables for the Father Ethnic Socialization Model (Upper Triangle) and Mother Ethnic Socialization Model

	Gender	Nativity	W2 economic pressure	W2 family income	W2 ethnic exploration	W2 ethnic Pride	W2 peer discrimination	W2 NEC	W2 ethnic socialization	W3 ethnic exploration	W3 ethnic pride	W3 peer discrimination
Gender	—	-.013	-0.07	0.082	-0.06	-0.167**	0.089	-0.029	-0.041	-0.18**	-0.176*	-0.007
Nativity	-.055	—	-0.214**	0.366**	-0.073	-0.03	-0.143**	-0.158**	-0.097*	-0.063	-0.106*	-0.028
W2 economic pressure	-.054	-.191**	—	-0.539**	0.126**	0.086	0.105*	0.17**	0.017	0.147**	0.156**	0.014
W2 family income	.012	.331**	-0.512**	—	-0.113*	-0.08	-0.09	-0.337**	-0.06	-0.15**	-0.186**	0.007
W2 ethnic exploration	-.047	-.067	-0.036	0.001	—	0.383**	0.095*	0.028	0.125**	0.474**	0.267**	0.058
W2 ethnic pride	-.153**	-.037	-0.032	0.023	0.412**	—	0.026	-0.024	0.088	0.251**	0.459**	0.021
W2 peer discrimination	.057	-.147**	0.161**	-0.076*	0.06	-0.016	—	-0.086	0.049	0.072	0.044	0.316**
W2 NEC	-.036	-.107**	0.189**	-0.323**	0.033	0.014	-0.115**	—	-0.029	0.125**	0.019	-0.209**
W2 ethnic socialization	-.022	-.126**	0.114**	-0.122**	0.17**	0.13**	0.023	0.068	—	0.165**	0.100*	0.056
W3 ethnic exploration	-.156**	-.015	0.061	-0.064	0.42**	0.22**	0.086*	0.108**	0.142**	—	0.364**	0.029
W3 ethnic pride	-.173**	-.067	0.114**	-0.104**	0.21**	0.386**	0.065	0.034	0.174**	0.386**	—	0.025
W3 peer discrimination	-.011	-.023	0.026	0.009	0.042	-0.003	0.349**	-0.228**	-0.007	0.025	-0.003	—
Mean mother sample	—	—	-0.043	7.594	3.742	4.510	1.616	57.822	3.192	3.741	4.611	1.820
SD mother sample	—	—	3.164	4.602	0.727	0.569	0.703	23.470	0.503	0.769	0.522	0.660
Mean father sample	—	—	-0.051	8.810	3.755	4.536	1.622	57.259	3.131	3.766	4.623	1.837
SD father sample	—	—	3.070	4.794	0.716	0.534	0.701	24.102	0.513	0.750	0.525	0.661
Intraclass correlations ^a	.001	.068	0.090/0.010	0.369/0.324	0.030	0.022	0.054	—	0.063/0.002	0.031	0.041	0.081

Note. Gender (0 = female, 1 = male) and nativity (0 = Mexico born, 1 = U.S. born) were represented by binary variables. Correlations, means, and standard deviations calculated using full information maximum likelihood (FIML) in Mplus. Mothers: $N = 733$; Fathers: $n = 460$. NEC = neighborhood ethnic concentration; ICC = intraclass correlation coefficient.

^aIn the cases where both mothers and fathers reported on the same data, ICCs before the diagonal are for mothers; ICCs after the diagonal are for fathers.

* $p < .05$. ** $p < .01$.

Results

Preliminary Analyses

Descriptive statistics and correlations among all study variables can be found in Table 1. Seventh-grade neighborhood ethnic concentration correlated positively with 10th-grade ethnic exploration and negatively with 10th-grade perceived peer discrimination; it did not correlate with 10th-grade ethnic pride. The quadratic neighborhood ethnic concentration terms (along with their interactions with mothers' and fathers' ethnic socialization) were nonsignificant and, therefore, dropped in favor of parsimony. Statistical conclusions for our study hypotheses replicated across the two operationalizations of SES (income and economic pressure; Table 2). We, therefore, focus on the culturally informed, economic pressure models (Figure 1).

Table 2. Unstandardized Path Coefficients Predicting 10th-Grade (W3) Ethnic Exploration, Ethnic Pride, and Perceived Peer Discrimination

	Mother-adolescent models ($N = 733$)				Father-adolescent models ($n = 460$)			
	Economic pressure covariate		Income covariate		Economic pressure covariate		Income covariate	
	β	SE	β	SE	β	SE	β	SE
Ethnic exploration (W3)								
Gender	-.198***	.056	-.200***	.057	-.219***	.067	-.219***	.068
Nativity	.047	.059	.053	.060	.005	.069	.009	.072
W2 ethnic exploration	.415***	.045	.414***	.044	.446***	.050	.449***	.049
SES covariate	.012	.010	-.006	.007	.014	.012	-.005	.008
Parent ES	.089	.051	.091	.052	.135*	.066	.134*	.067
NEC	.003*	.001	.003*	.001	.003*	.001	.003*	.002
ES \times NEC	-.002	.002	-.002	.002	-.002	.003	-.002	.003
Ethnic pride (W3)								
Gender	-.117**	.039	-.121**	.039	-.106*	.044	-.102*	.045
Nativity	-.041	.039	-.025	.042	-.086	.046	-.069	.045
W2 ethnic pride	.319***	.043	.320***	.044	.414***	.061	.416***	.059
SES covariate	.016*	.007	-.011	.006	.014	.009	-.010	.006
Parent ES	.115**	.037	.116**	.037	.057	.044	.055	.044
NEC	< .001	.001	< .001	.001	< .001	.001	< .001	.001
ES \times NEC	< .001	.002	< .001	.002	-.001	.002	-.001	.002
Perceived peer discrimination (W3)								
Gender	-.049	.045	-.049	.045	-.049	.063	-.047	.064
Nativity	.005	.058	.018	.058	-.016	.079	-.004	.075
W2 peer discrimination	.309***	.042	.308***	.043	.280***	.053	.279***	.054
SES covariate	.002	.008	-.005	.007	.003	.012	-.005	.009
Parent ES	-.004	.046	-.006	.046	.030	.068	.026	.069
NEC	-.005***	.001	-.006***	.001	-.005***	.001	-.005***	.001
ES \times NEC	.001	.002	.001	.002	-.002	.003	-.002	.003

Note. β = unstandardized coefficient; SE = standard error; NEC = neighborhood ethnic concentration; ES = ethnic socialization; SES = socioeconomic status. * $p \leq .05$. ** $p \leq .01$. *** $p \leq .001$.

Neighborhood Ethnic Concentration and Parents' Ethnic Socialization Models

The single-group mother-adolescent dyad and the father-adolescent dyad models exhibited good model fit to the data, $\chi^2_{\text{mother}}(6) = 9.02$, $p = .17$, $RMSEA_{\text{mother}} = .026$, $CFI_{\text{mother}} = .995$;

$\chi^2_{\text{father}}(6) = 6.68$, $p = .35$, $\text{RMSEA}_{\text{father}} = .016$, $\text{CFI}_{\text{father}} = .998$. Multiple group analyses for both the mother–adolescent dyad models and the father–adolescent dyad models confirmed the generalizability of findings across adolescent gender, indicating that the path coefficients were the same for girls and boys. Furthermore, multigroup analyses of the mother–adolescent dyad models confirmed the generalizability of the findings across household structure. Multigroup analyses did, however, reveal one nativity difference in the mother–adolescent dyad models. This is discussed below. Raw path coefficients for the theoretical model of neighborhood ethnic concentration effects on ethnic attitude and identity development (above and beyond or in combination with parents' ethnic socialization) are presented in Figure 1 (details for the fully estimated model, including all analytic path coefficients and standard errors, are presented in Table 2).

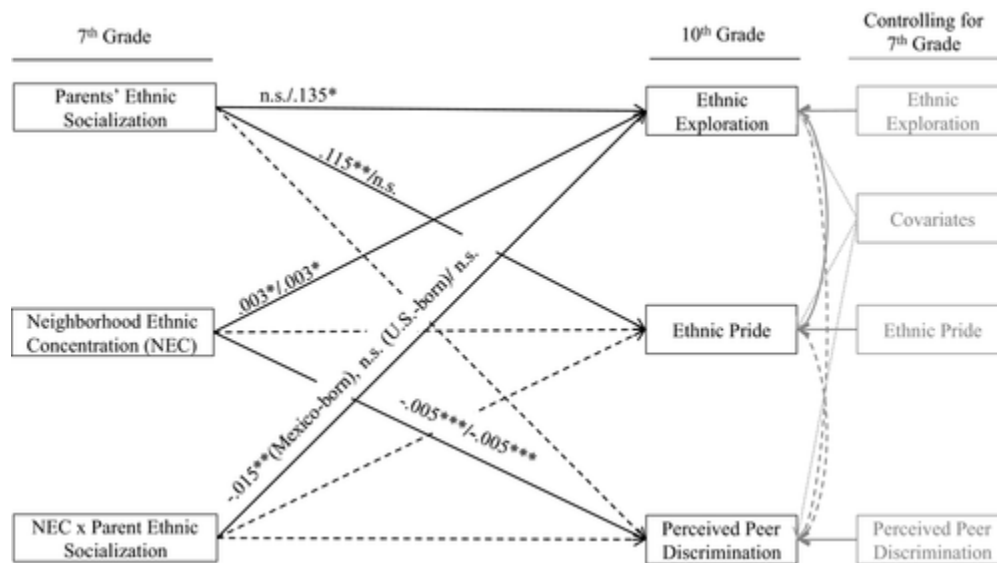


Figure 1. Main and interactive effects of neighborhood ethnic concentration on changes in Mexican-origin adolescents' ethnic attitudes and identities.

Note. Separate models were run for mother–adolescent dyads ($N = 733$; unstandardized coefficients reported first) and father–adolescent dyads ($n = 460$; unstandardized coefficients reported following the forward slash). Solid lines are significant in at least one model. Dashed lines were nonsignificant (n.s.) in both models tested. All models controlled for the effect of covariates (i.e., youth sex, youth nativity, and economic pressure) on the dependent variables; those paths are not detailed in the figure in an effort to enhance clarity. Complete model results, including paths for individual covariates, are available in Table 2. * $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$.

Mother–Adolescent Dyad Models

Mothers' ethnic socialization predicted relative increases in ethnic pride 3 years later. It did not predict ethnic exploration or perceived peer discrimination. Neighborhood ethnic concentration predicted relative increases in ethnic exploration and relative decreases in perceived peer discrimination. Thus, there was a *positive linear* association between neighborhood Latino concentration and ethnic exploration, and a *negative linear* association between Latino concentration and perceived peer discrimination. Neighborhood Latino concentration did not predict ethnic pride. The neighborhood Ethnic Concentration \times Ethnic Socialization interaction was not a significant predictor for any of the dependent variables in the full sample.

In the nativity multigroup model, however, nativity significantly moderated the association between ethnic exploration and the neighborhood Ethnic Concentration \times Ethnic Socialization interaction, $\chi^2(3) = 11.25, p = .01$: The interaction was significant in the Mexico-born group ($\beta = -.015, SE_{\beta} = .005, p = .003$) but not significant in the U.S.-born group ($\beta = -.001, SE_{\beta} = .002, p = .606$). When the interaction was probed in the Mexico-born group, results showed that at high neighborhood ethnic concentration (1 *SD* above the mean), there was no significant effect of mothers' ethnic socialization on ethnic exploration ($\beta = -.101, SE_{\beta} = .145, p = .489$). At low and mean levels of neighborhood ethnic concentration, however, mothers' ethnic socialization predicted relative increases in ethnic exploration ($\beta_{\text{low}} = .624, SE_{\beta} = .184, p = .001$; $\beta_{\text{mean}} = .262, SE_{\beta} = .111, p = .019$). This interaction is graphed in Figure 2 and is consistent with a family compensatory effect.

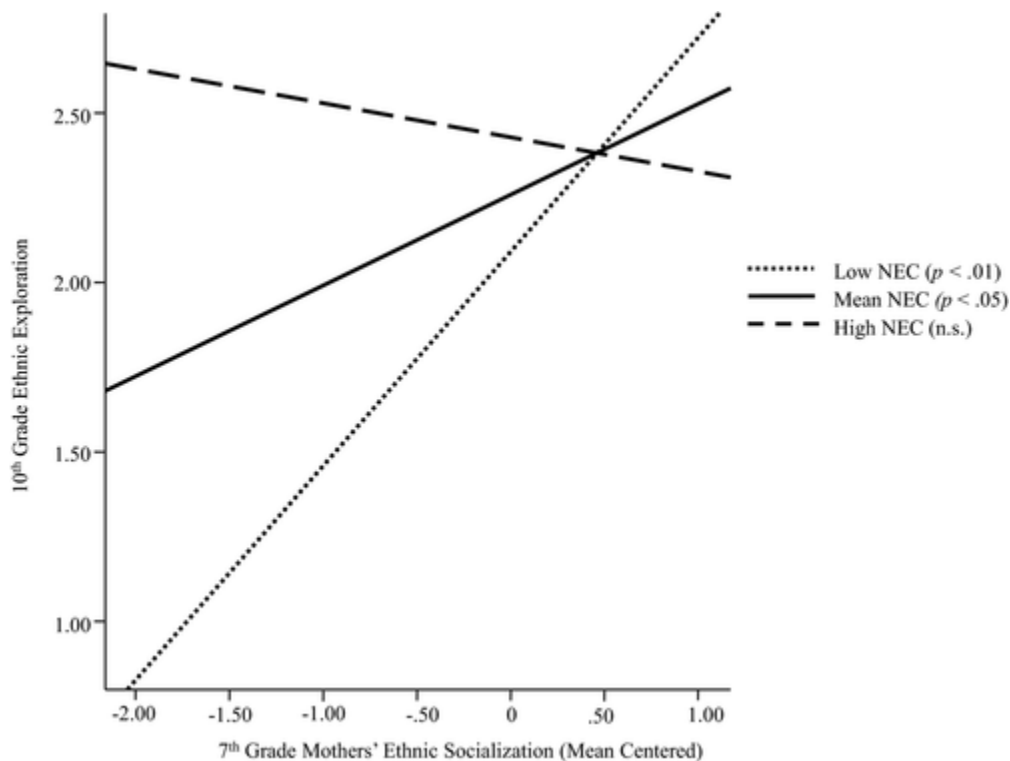


Figure 2. Plot of the interaction between neighborhood ethnic concentration and mother's ethnic socialization among the Mexico-born subsample.

Note. NEC = neighborhood ethnic concentration.

Father–Adolescent Dyad Models

Fathers' ethnic socialization positively predicted adolescents' ethnic exploration 3 years later. Fathers' ethnic socialization did not predict ethnic pride or perceived peer discrimination. Neighborhood ethnic concentration predicted higher levels of ethnic exploration and lower levels of perceived peer discrimination 3 years later but did not predict changes in ethnic pride. Thus, there was a *positive linear* association between neighborhood Latino concentration and ethnic exploration and a *negative linear* association between Latino concentration and perceived peer discrimination. The interaction between neighborhood ethnic concentration and fathers' ethnic socialization was not a significant predictor for any of the dependent variables.

Discussion

In the current study, we explored the influence of neighborhood Latino ethnic concentration on Mexican-origin adolescents' ethnic attitude and identity development above and beyond or in combination with parents' ethnic socialization. Neighborhood coethnic concentration levels during early adolescence predicted relative increases in middle adolescent ethnic exploration and relative decreases in perceived peer discrimination. These findings are consistent with the *ethnic concentration* hypothesis derived from multiple theoretical traditions (García Coll et al., 1996; Portes et al., 2009; Sampson et al., 1997). Neighborhood coethnic concentration did not, however, predict ethnic pride. There was limited evidence that neighborhood coethnic concentration interacted with parents' ethnic socialization: For the subgroup of adolescents that were born in Mexico, mothers' ethnic socialization efforts compensated for constraints to ethnic exploration associated with living in neighborhoods moderate to low on coethnic concentration. In terms of parents, mothers' ethnic socialization predicted relative increase in ethnic pride, whereas fathers' ethnic socialization predicted relative increases in ethnic exploration. With the exception of the one subgroup difference for adolescents born in Mexico, all other findings generalized across adolescent gender, adolescent nativity, and household structure. All findings generalized regardless of the SES indicator used (i.e., economic pressure or annual family income). The work addresses major gaps: Prior reviews of the neighborhood effects on adolescent development literature have highlighted the limited focus on identity development (Murry et al., 2011), and prior reviews of ethnic identity development research have highlighted the limited focus on neighborhoods (Umaña-Taylor et al., 2014).

Main and Interactive Neighborhood Ethnic Concentration Effects

Main Effects

We found that Mexican-origin youth appear to seek or be exposed to more opportunities to explore what their ethnicity means to them (above and beyond those provided by their parents) and perceived lower levels of peer discrimination when they lived in neighborhoods that were higher on coethnic concentration. During early adolescence, a critical period for independent neighborhood exposures (Leventhal et al., 2009), variability in neighborhood ethnic concentration produces corresponding variability in numerous aspects of the developing youths' ecological niche, including institutional resources, social infrastructures, social processes, behavioral norms, and interpersonal interactions (García Coll et al., 1996; Sampson, Morenoff, & Earls, 1999; Yoshikawa, 2011). The differential exposure to cultural-institutional resources and related social processes in neighborhoods (Sampson et al., 1999) are the sources of implicit messages about race and ethnicity (Hill & Witherspoon, 2011). Those neighborhoods that are higher on coethnic or coracial concentrations are likely to maintain culturally supportive institutional resources, social infrastructures, behavioral norms, and interpersonal interactions (Yoshikawa, 2011) that provide coethnic or coracial adolescents with organized (Sampson et al., 1997), safe, and supportive places to develop their ethnic and racial identities (Feinauer & Whiting, 2012; Stevenson & Arrington, 2009; White et al., 2014) through exploration.

Our longitudinal findings replicated and conceptually extended some aspects of a few cross-sectional studies (Feinauer & Whiting, 2012; Stevenson & Arrington, 2009) but are in contrast to others that found no significant neighborhood effects (Hurd et al., 2013; Rivas-Drake & Witherspoon, 2013; Supple et al., 2006). Although U.S. Latinos and Mexican-origin families (Roosa et al., 2009) reside across the full spectrum of neighborhood Latino concentration, Supple et al. (2006) had a restricted range of neighborhood Latino concentration that may have resulted in a failure to detect effects. Hurd et al. (2013) focused on emerging adult neighborhood contexts and may have missed the critical developmental period for neighborhood coracial concentration effects on the development of racial attitudes. Rivas-Drake and Witherspoon (2013) included a composite of several different aspects of the neighborhood, only one of which (indirectly) assessed coracial concentration levels. The mix of neighborhood indicators makes it difficult to compare their findings to hypotheses derived from theory emphasizing coethnic or coracial concentration as developmentally salient features of the neighborhood ecology (García Coll & Marks, 2009; García Coll et al., 1996). In the current study, and consistent with that theory and limited prior evidence (Feinauer & Whiting, 2012; Stevenson & Arrington, 2009; White et al., 2014), we hypothesized the effects of *coethnic Latino* concentration (ranging from low to high) for the development of *Mexican-origin Latinos'* ethnic attitudes and identities during *adolescence*. These may have been critical developmentally, contextually, and culturally informed (García Coll et al., 1996; Sampson et al., 1997) design decisions that resulted in capturing significant neighborhood ethnic concentration effects on multiple aspects of ethnic attitude and identity development.

During this same developmental period, however, and contrary to our *ethnic concentration* hypothesis, coethnic concentration had no effect on adolescents' ethnic pride. One possible explanation is that, among highly concentrated Latino neighborhoods, only those that also have higher adult education levels promote the development of positive feelings toward the in-group (Oyserman & Yoon, 2009). Because Latino concentration and education were strongly and negatively correlated in the current study, we were unable to examine this hypothesis. Alternatively, ethnic pride reflects a sense of affirmation and positive feelings or attitudes toward one's ethnic group (Umaña-Taylor et al., 2012). As it regards the development of ethnic *attitudes*, our findings for ethnic pride replicate prior findings with African Americans, which generally have documented few (Stevenson & Arrington, 2009) or no (Hurd et al., 2013; Rivas-Drake & Witherspoon, 2013) associations between coracial concentration and the positive feelings that adolescents and emerging adults felt toward their racial group. Unlike ethnic pride, however, ethnic exploration and perceived peer discrimination are both *proximal processes* (Bronfenbrenner & Morris, 2006), because they assess adolescents' interactions with persons, objects, and symbols in their immediate environments (e.g., attending events and learning about an ethnic background or getting called names because of an ethnic background). As it regarded these two *processes*, we observed neighborhood coethnic concentration effects that are consistent with some prior work (Feinauer & Whiting, 2012; White et al., 2014).

In the current study, and consistent with calls made elsewhere (García Coll & Marks, 2009; Umaña-Taylor et al., 2014), we tested the effects of coethnic Latino concentration for multiple components (including both attitudes and processes) associated with ethnic and racial attitude and identity development. This may be especially critical during early and middle adolescence, when these different components are expected to be more and less developed (Umaña-Taylor

et al., 2009). Thus, in addition to developmental timing and the importance of theorizing coethnic concentration, our focus on proximal processes related to identity development, versus a focus on ethnic or racial attitudes (Hurd et al., 2013; Oyserman & Yoon, 2009; Rivas-Drake & Witherspoon, 2013; Stevenson & Arrington, 2009), may be an important, distinguishing feature of the work. The ethnic or racial structuring of early adolescent neighborhood environments may have important implications for proximal processes related to the development of ethnic and racial attitudes and identities. This structuring, however, may not yet be influencing the specific nature of adolescents' increasingly autonomous attitudes toward their in-group. Importantly, it is possible that these same neighborhood environments have later implications for ethnic attitudes via intermediate changes in processes (Hurd et al., 2013; Spears Brown & Bigler, 2005; Stevenson & Arrington, 2009; Umaña-Taylor et al., 2014). Future work should continue to explore the implications of neighborhood coethnic or coracial concentrations for within-group attitudes *and* identity processes.

We did not find support for the *numerical minority* or *diversity* hypotheses. Much of the research supporting these hypotheses has focused on the school context (French et al., 2000, 2006; Umaña-Taylor, 2004). There is emerging evidence to suggest that even parallel aspects of school and neighborhood environments (e.g., ethnic structuring of schools and of neighborhoods) do not have the same implications for adolescent development (Munniksma, Scheepers, Stark, & Tolsma, 2016) or ethnic attitude and identity development (White et al., 2016). Consequently, the focus on school context versus neighborhood context is likely to be an important distinction. Oyserman and Yoon (2009), however, did focus on the diversity of the *neighborhood* context, but they examined *relative* neighborhood diversity, calculating a diversity index that compared ethnic and racial mixing in each neighborhood relative to the city-wide demographics in Detroit. In that city, based on city-wide demographics presented in the article, a neighborhood with 80% Latinos would have a nearly identically *high* diversity score as a neighborhood with 80% Whites, whereas the neighborhood with 80% Blacks would have an extremely *low* diversity score (Oyserman & Yoon, 2009). According to social disorganization theory, however, all three would be high on ethnic group or racial group concentration (Sampson et al., 1997). All three, according to cultural-developmental and immigrant adaptation perspectives, would be experienced uniquely by in- and out-group members (García Coll et al., 1996; Portes et al., 2009). Consequently, diversity indices situated in local geographies and demographics (Oyserman & Yoon, 2009) can complicate cross-study comparisons.

Underlying *numerical minority* and *diversity* effects hypotheses is the idea that when ethnic or racial phenotypes place individuals in a minority status in their communities (which can happen in either low coethnic concentration neighborhoods or in racially or ethnically mixed neighborhoods), they are more likely to be aware of their ethnic or racial group memberships (Rumbaut, 2008). The *local* community (i.e., the neighborhood), however, may not be the only context that defines minority status. Today, the macrocontext of the United States may sufficiently define minority status (Umaña-Taylor, 2004), even for those living in concentrated coethnic or coracial neighborhoods. Consequently, adolescents may not need their residential neighborhoods to define their minority status and may, instead, need to rely upon residential neighborhoods as safe, promoting environments that provide rich opportunities to explore their ethnic and racial backgrounds (García Coll & Marks, 2009). In light of the plurality of past findings and hypotheses, it is critical to continue to examine all three hypotheses (*ethnic*

concentration, numerical minority, and diversity) across numerous geographies, groups, and settings to shed light on the developmental implications of ethnic and racial concentrations and dispersions.

Interactive Effects

We found limited evidence of Parenting \times Neighborhood interaction effects. Among Mexico-born adolescents, those living in high concentration neighborhoods had uniformly high levels of ethnic exploration, regardless of mothers' ethnic socialization. For those living in neighborhoods that were moderate to low on ethnic concentration, however, mothers' ethnic socialization predicted relative increases in ethnic exploration. Consistent with prior qualitative findings (Portes et al., 2009), mothers' ethnic socialization may be compensating for restricted access to the coethnic community and the lack of culturally salient neighborhood resources in mainstream (i.e., predominantly non-Latino White) neighborhoods (García Coll & Marks, 2009; Yoshikawa, 2011). Perhaps the compensatory effect for Mexico-born adolescents reflects their tendency to display stronger endorsement of familial cultural values and traditional gender role attitudes (Knight et al., 2010) that increase the salience of mothers' parenting. This increased salience may result in mothers' ethnic socialization having longer (i.e., further into adolescence) and stronger impacts on their immigrant adolescents' ethnic exploration. Research that can account for more refined sources of within-group diversity (e.g., cultural, phenotypical, experiential) may shed light on this finding. We, however, also encourage restraint from overinterpreting this subsample finding because, looking across the entire study, there was little evidence of Neighborhood \times Parenting interaction effects. Still, our ability to test this hypothesis is a major advance over prior work, which was unable to test similar hypotheses due to empirical restrictions (Stevenson & Arrington, 2009), including a restricted range of neighborhood coracial or coethnic concentration levels (Caughy et al., 2006; Supple et al., 2006).

Parents' Ethnic Socialization Effects

In two comprehensive reviews, scholars have highlighted parents and families as significant determinants of minority adolescents' ethnic and racial attitude and identity development (Hughes et al., 2006; Umaña-Taylor et al., 2014). Both reviews, however, noted a dearth of research on how neighborhood contexts influence ethnic and racial identity development in tandem with parents' ethnic socialization and both (circumstantially) reviewed works that often overlooked fathers. When we examined both mothers' and fathers' ethnic socialization behaviors in tandem with neighborhood ethnic concentration in early-to-middle adolescence, the salience of parents' ethnic socialization was more nuanced than either of those prior reviews suggested. First, neither parent's ethnic socialization predicted perceived peer discrimination during adolescence (which was influenced by neighborhood ethnic concentration). Second, mothers' ethnic socialization *did not* predict changes in ethnic exploration (which was predicted by neighborhood ethnic concentration) but *did* predict relative increases in ethnic pride. Fathers' ethnic socialization *did* predict relative increases in ethnic exploration (which was also predicted by neighborhood ethnic concentration) but *did not* predict ethnic pride. Perhaps, in part, because adolescents place different meanings on maternal and paternal parenting behaviors (White, Liu, Nair, & Tein, 2015), mothers' ethnic socialization behaviors are helping youth to develop

positive attitudes toward their ethnic group; the same behaviors enacted by fathers, however, are helping youth to learn and explore what it means to be a member of their group.

Prior work consistently supported the importance of maternal ethnic socialization and inconsistently supported the importance of paternal ethnic socialization for ethnic attitude and identity development. Contrary to maternal-only ethnic socialization effects (Knight et al., 2011), maternal *and* paternal ethnic socialization effects (Hernández et al., 2014), and established links between parental ethnic socialization and adolescents' perceptions of discrimination (Stevenson & Arrington, 2009; Umaña-Taylor & Guimond, 2012), we found that mothers, fathers, and neighborhoods promoted different components of ethnic attitude and identity development. The prior work sampled children or very young adolescents (cf. Umaña-Taylor & Guimond, 2012) and did not account for neighborhood ethnic or racial concentrations (cf. Stevenson & Arrington, 2009). The relative salience of intrafamilial (mother and father) and neighborhood socialization forces on diverse components of ethnic and racial attitude and identity development are likely to vary across adolescence, depending on where the individual is in the horizontal ethnic and racial identity *décalage* (Umaña-Taylor et al., 2009).

Summary and Future Directions

Consistent with models specific to ethnic and racial identity development (Knight et al., 1993; Umaña-Taylor et al., 2014), we broadly found that Mexican-origin Latino adolescents' ethnic exploration and perceived peer discrimination were influenced by their neighborhood environments. Consistent with neighborhood theory and perspectives highlighting the importance of the coethnic community, we specifically found that highly concentrated Latino neighborhoods sheltered coethnic adolescents from exposure to peer discrimination and promoted ethnic exploration. Neighborhood theory recognizes the organizing capacity of high neighborhood Latino concentration and highlights the importance of capturing the full range (approximately 0%–100%) to examine its benefits (Sampson et al., 1997). Cultural-developmental (García Coll et al., 1996) and immigrant adaptation (Portes et al., 2009) perspectives recognize that access to the in-group, or to the coethnic and coracial communities (and culturally salient resources contained therein; Yoshikawa, 2011), may promote ethnic and racial minority adolescents' ethnic and racial identity development and shelter them from discrimination. Ultimately, integrating diverse perspectives to examine culturally and contextually informed hypotheses regarding neighborhood racial and ethnic structuring effects on adolescent development may improve predictive and explanatory powers of neighborhood effects scholarship for a wider cultural and contextual range of U.S. youth. Consistent with all theoretical perspectives, mothers and fathers also had important implications for ethnic attitude and identity development, but the nature of their effects depended on the parent (mother vs. father), the outcome (pride vs. exploration), and (for some) the ethnic structuring of their neighborhoods (high vs. moderate to low Latino concentration). Longitudinal research that can evaluate both neighborhood and familial (including both mothers and fathers simultaneously) socialization effects across a broad age range is critical for testing hypotheses regarding the developmental timing of maternal, paternal, and neighborhood influences on ethnic attitude and identity development.

Our study had notable strengths that need to be viewed in light of its limitations. We tested our hypotheses (along with competing hypotheses) in a large sample of mothers and adolescents living in U.S. neighborhoods. To recognize the important role that Mexican-origin fathers play in their adolescents' lives, we also tested our hypotheses in a subsample of fathers, adolescents, and neighborhoods. Future work may want to examine maternal and paternal ethnic socialization in the same model. We included a limited set of neighborhood selection controls, based on culturally informed selection models (White et al., 2014): SES (economic pressure or annual family income), nativity status, and parents' endorsement of ethnic socialization practices (Portes & Rumbaut, 2001). In addition, our results controlled for earlier levels of the ethnic attitude and identity variables. These analytic modeling choices reduced, but did not eliminate, the possibility that our observed neighborhood effects exist because families selected into certain neighborhoods. Only true experimental designs can eliminate this selection confound (Dupéré et al., 2010). We examined the ethnic structuring of neighborhood environments but did not have measures of neighborhood-level social processes that might help to explain observed associations. Work that can zero in on the underlying social processes is considered a critical next step, particularly because social processes that have served as the cornerstones of neighborhood effects scholarship (e.g., collective efficacy, intergenerational closure; Leventhal et al., 2009) have often failed to explain ethnic concentration effects on development in prior works (Browning et al., 2008; Jackson et al., 2016). Finally, we were unable to measure dosage or degree of exposure to residential neighborhoods and the socialization processes that take place within them. Recent perspectives on activity spaces (Noah, 2015) would substantially build upon the current work by identifying real-time exposures to specific socializing forces in families and neighborhoods.

Increases in ethnic exploration and decreases in perceived peer discrimination are benefits to Mexican-origin adolescents associated with living in a coethnically concentrated neighborhood environment. Similar benefits to Latinos (Feinauer & Whiting, 2012; White et al., 2014) and African Americans (Stevenson & Arrington, 2009) are also documented. Ethnic and racial segregation, however, are indefensible policy response to observed benefits. Nevertheless, practitioners working with minority adolescents living in ethnically or racially concentrated neighborhoods need to expand beyond a deficit view of these neighborhoods. Additionally, practitioners working with ethnic and racial minority adolescents that are living in more mainstream (European America) neighborhoods may want to consider that sociocultural resources promoting positive ethnic and racial identity development may be lacking therein. Theoretically integrated work will prove critical to identifying which underlying, malleable mechanisms should be targeted to support healthy ethnic and racial identity development among minority youth living outside of coethnically or coracially concentrated neighborhood environments.

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